INSTRUCTIONS FOR ASSEMBLY, OPERATION AND MAINTENANCE

KESSEL - backwater pumping station *Pumpfix® F* Standard/Comfort

for wastewater with and without sewage

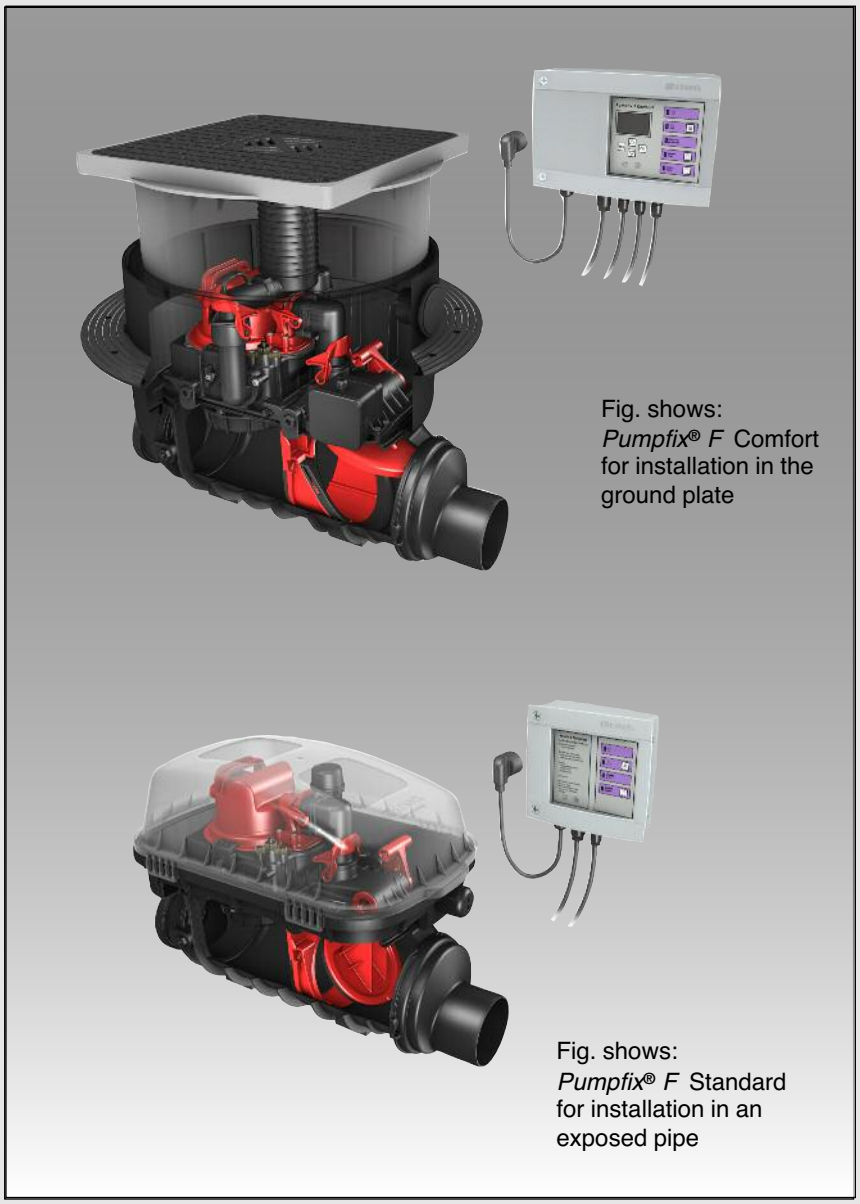

Fig. shows:
Pumpfix® F Comfort
for installation in the
ground plate

Fig. shows:
Pumpfix® F Standard
for installation in an
exposed pipe

Product advantages

- **For wastewater with and without sewage**
- **Backwater flap and draining pump**
- **Simple installation in through pipes**
- **Plug & play control unit**
- **Control unit with self-diagnosis system (SDS) with integrated battery back-up**
- **Straightforward replacement of wearing parts**
- **Simple tool-free servicing**
- **Additional advantages of the Komfort version:**
- **Control unit with display**
- **Motor-driven locking of the backwater flap**
- **Integrated drain function for surface water drainage**

The installation and service of this unit should be carried out by a licensed professional servicer

Name/Sign Date Town

Stamp

Subject to technical amendments

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1. Safety instructions

Dear customer,
Before you put your backwater pumping station *Pumpfix® F* into operation, please read through the installation instructions carefully and follow them.

Check first whether the system has arrived undamaged. In the event of transport damage, please follow the instructions in chapter 6 “Warranty”.
1. Safety instructions:
During installation, operation, maintenance or repair of the system, the regulations for the prevention of accidents, the pertinent DIN and VDE standards and directives, as well as the directives of the local power supply industry must be heeded.
Before putting the device into operation, make sure through professional examination that the necessary protective features are available. Grounding, neutral, residual current-operated protective circuit etc. must correspond to the requirements of the local power supply industry.
The system must not be operated in potentially explosive areas.
The system contains electric charges and controls rotating mechanical system components. Non-compliance with the operating instructions may result in considerable damage to property, personal injuries or even fatal accidents.

The system must be disconnected from the mains or made currentless before any work is carried out on it.

It must be ensured that the electric cables as well as all other electrical system equipment are in a faultless condition. In case of damage, the system may on no account be put into operation or must be stopped immediately.
The system must be inspected and serviced according to DIN 1986 to maintain its operational ability.
We recommend that you conclude a servicing contract with your installation company.
No repairs or maintenance work may be carried out during a backwater situation or if a backwater situation is imminent. The backwater flaps and the locking lever always have to be able to be moved freely.

Note:
No system components may be installed in protection zone 0 or 1 in accordance with DIN VDE 0100 701. In the case of flush-to-floor showers, zone 1 is defined as with a radius of 1.20 m (projected area on the floor) around the water intake point. Deviating local regulations must be taken into account.
The regulations set out by the directives VDE 0100, VDE 01107, IEC or by the local power supply industry must be heeded.
The control unit must not be installed in rooms where there is an explosion hazard. For the operation of this system, these instructions and instructions no. 010-846 must be used together!

2. General

2.1 Use

The KESSEL backwater pumping station Pumpfix® F has been designed for through wastewater pipes that have soiled water pipes as well as toilets and urinals connected to them. This guarantees the safe draining of draining spots below the backwater level even during backwater. The pump only works during backwater and pumps the soiled water into the sewage channel against the backwater. During backwater-free operation, the soiled water is discharged into the sewage channel through the natural gradient.

Pumpfix® does not provide protection against rats! If there is a rat hazard, the system must be protected from damage onsite.

A rat protection flap is available as an option and prevents damage caused by gnawing to a large extent (Standard only).

Important:

Pre-condition for trouble-free operation is

- Sufficient gradient in the draining pipes (note: there is a gradient of 9 mm between feed and drain with Pumpfix® F)
- A high share oSufficient gradient in the draining pipes (note: there is a gradient of 9 mm between feed and drain with Pumpfix® F)
- A high share of water in the wastewater to optimise the self-cleaning effect
- Correct routing and ventilation of the feed pipe in accordance with DIN EN 12056 / DIN 1986-100
- Use with greasy wastewater only possible with increased maintenance and cleaning efforts
- Rain surfaces up to max. 20 m²

2.2 Scope of supply

The scope of supply of the KESSEL backwater pumping station Pumpfix® F is made up of the drain body with pump and backwater valve and the electric packages.

The electric packages are made up of:

Standard

1. The optical probe
2. A control unit (mains connection 230 V, 50 Hz, protective rating IP 54) with battery back-up (2 x 9V) for alarm message in the event of a power failure.
3. An installation and operating manual

Comfort

1. Two optical probes and the drive motor
2. One control unit with display (mains connection 230 V, 50 Hz, protective rating IP54) with battery back-up (2 x 9V) for alarm message in the event of a power supply.
3. An installation and operating manual

2.3 Installation procedure

During the construction phase only the drain body is installed and connected in accordance with chapter 3. Usually, the power connection (chapter 4) and subsequent initial operation (chapter 5) cannot be carried out directly. Please connect the electric system components (pump, probes, motor and control unit, depending on the variant) when you put the KESSEL backwater pumping station Pumpfix® F into operation. Until this point, the enclosed electric package and the control unit must be kept stored in a clean and dry place. Only remove the plug end plates when the system is put into operation.

Care must be taken that the system is always sealed with an upper cover section and cover or protective hood when set up as a free-standing device in order to prevent soiling of the system.

Caution: The pump is secured by a transportation safety tape that has to be removed before initial operation.

2.4 General instructions about the installation of backwater valves

According to DIN EN 12056 backwater valves may not be used to protect all the draining points of a building - including those above the backwater level (street level) - because if the backwater valve is closed, the wastewater from above can no longer be drained into the sewage pipe but will - according to the principle of communicating pipes - escape from the drainage points furthest below the backwater level first (usually basement rooms) and thus flood the basement.

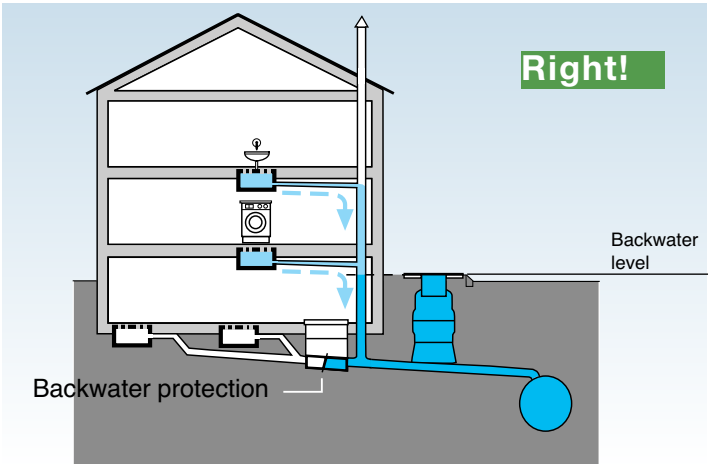
Only draining points below the backwater level may be protected against backwater. All draining points above the backwater level must be discharged into the sewage pipe with free gradient past the backwater valve.

Consequence: separate pipe routing.

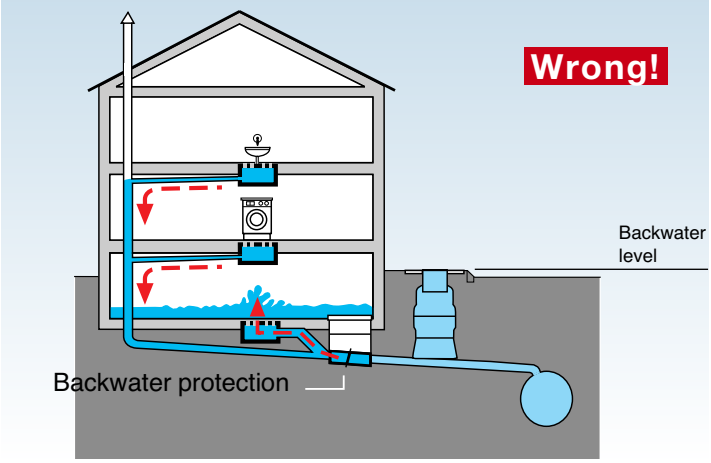
Domestic wastewater above the backwater level can thus rise up to a maximum of street level inside the downpipe without flooding the basement.

Rainwater must never be discharged via backwater valves.

Installation of a backwater valve in the right place



Installation of a backwater valve in the wrong place



KESSEL

3. Installation

Please note:
DIN EN 12056 must always be heeded when routing the base pipes. Downpipes must always be introduced downstream from the Pumpfix® F (about 1m). In addition, a stilling section must be observed upstream and downstream of the FKA (at least 1 m). During installation of the backwater valve, care must be taken that there is a sufficient gap to the wall for maintenance work to be carried out. The KG pipe must not be connected directly to the drain body but only to the muff.
Caution: During installation pay attention to the direction of flow arrows on the product.

3.1 Kessel backwater pumping station *Pumpfix® F* for installation in the ground plate

DThe drain body of the KESSEL-Pumpfix® F must be aligned horizontally (see Fig. 1).
For connection of the electric cables of probe and pump, a cable conduit (at least DN 50, Kessel recommends 2 x 45° bends) must be provided. A second probe cable and motor connection cable must be connected for the Komfort variant. For this, a cable conduit (at least DN 70, Kessel recommends 2 x 45° bends) must be planned. To do this, lay the cable conduit to at least finished flooring height (see Fig. 2) and insert in the cable duct in the adapter of the KESSEL Pumpfix® F (cable conduit should protrude about 2 cm into the interior - tightness (Fig. 5). Changes of direction must be laid with bends of max. 45°. To guarantee proper aerating and venting of the pump chamber, the cable conduit must not be sealed airtight. Insert the enclosed profile lip seal into the adapter groove and grease this. Then mount the upper cover section (see Fig. 3). Thanks to the telescopic design of the upper cover section, the KESSEL-Pumpfix® F can be adapted exactly to the prevailing installation depth. Ground slopes of up to 5° can be compensated. The upper cover section can also be turned to align the cover to the tile pattern, for example (see Fig. 4). The seal must be checked for a good fit after adjustment.

CAUTION:
The upper cover section must be shortened to the necessary size to achieve minimum installation depth. If necessary, recesses must be cut out of the upper cover section near the cable conduit and the ventilation pipe. Maximum groundwater resistance is 2 m. Following final alignment of the upper cover section, a recess may have to be introduced near the cable duct to enable the cable to be pulled out again during later inspections (see Fig. 5).
The lip seal must be fitted in the cover plate. Care must be taken that the sealing lip and centring lug are facing upwards during installation. The centring lug must be placed in the recess (see Fig. 6).
During installation, make sure that the function of units in the chamber is not impaired by construction material.

Installation of covers with a choice of finishes (tile height max. 15 mm).
With the covers with a choice of finishes, tiles or natural stone can be inserted in the cover on site, so that they can be matched to the room's flooring. Products e.g. from PCI, Schomburg, Deitermann are suitable for tile laying. To achieve straightforward processing and adhesion, we recommend the following procedure:

Tile laying:
a) aPrime the cover plate e.g. with PCI primer 303. Following the respective flash-off time, lay the tiles with silicone. This type of laying is particularly suitable for thinner tiles since the base can be filled up to the required height.
b) Laying the tiles e.g. using PCI Silcoferm S (self-adhesive silicone). This allows a thin adhesive bed to be used, particularly good for thicker tiles.

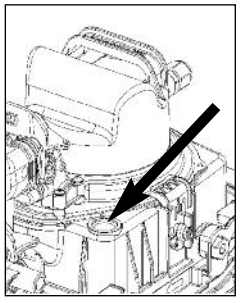
Laying natural stone:
(marble, granite, agglo-marble):
a) Prime the cover plate e.g. with PCI primer 303. Lay the natural stone panels using e.g. PCI-Carralit..
b) Laying the natural stone panels using e.g. PCI-Carraferm (special silicone for natural stone). Areas of application analogue to "Laying tiles".

3.2 Recessed installation in the ground plate

(order no. 83071). Chapter 3.4 must be heeded for installation in water load.
Depending on the installation depth, one or max. two extension pieces can be used between the upper cover section and the adapter. The respective seals must be greased accordingly.
Please note that with recessed installation you still have to be able to reach down to the drain body for maintenance purposes.

3.3. Ventilation connection

Pumpfix® F is fitted as standard with a ventilation valve with activated carbon filter. Alternatively, ventilation according to standard can be connected. For this, the ventilation valve can be removed and connected directly to a ventilation pipe (to the roof).



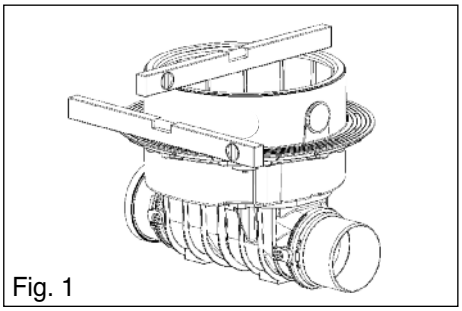


Fig. 1

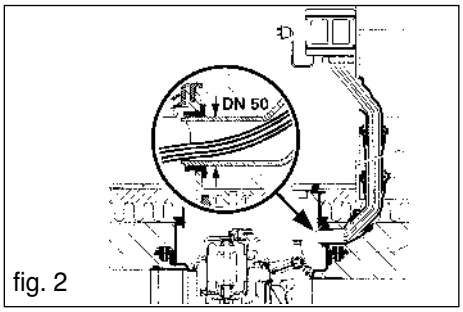


fig. 2

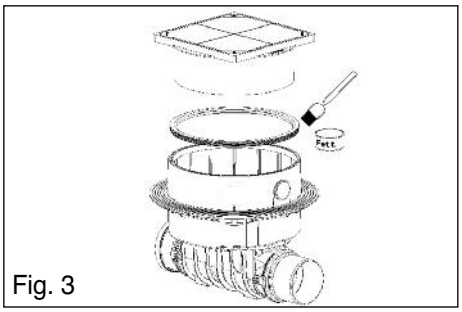

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Fig. 3

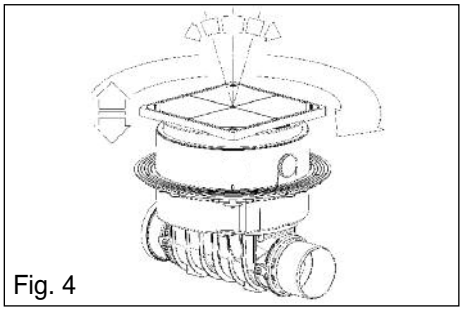


Fig. 4

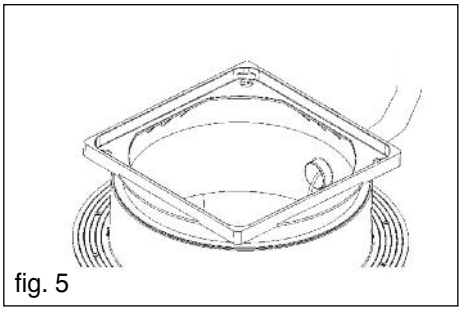


fig. 5

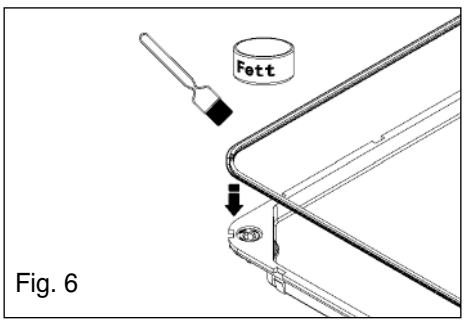


Fig. 6

3.4 Installation in an exposed wastewater pipe

The version for free-standing set-up is delivered with a protective hood to prevent damage to the components following commissioning. Fig. 7 shows the cable ducts – 1 or 2 (depending on the variant).

3.5 Installation in water load (Seal set art. no. 83023

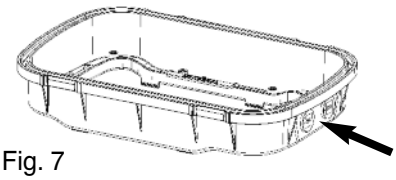


Fig. 7

If the valve is to be installed in water load, the flange serves as the necessary sealing level for a white or black tub (see Figure). For this purpose, seal sheeting is clamped between the plastic counterflange and the compression seal flange integrated on the drain body, and screwed together using the enclosed screws.
The sheeting used on site can be used as seal sheeting. For installation in a waterproof of white tub, KESSEL also has matching seal sheeting available made of natural rubber NK/SBR, where the bore holes for the screws have already been cut out (see Fig. 8).
If it is necessary to perforate the waterproof concrete tub to connect feed pipes, cable conduits etc., these holes must also be set up waterproof. Maximum groundwater resistance is 2 m.

Installation with extension (order no. 83071).
Use of the extension allows the flange height to be individually adjusted. The attachment must be shortened to the required height if necessary.

3.6 Special features of *Pumpfix® F* Comfort

Pumpfix F Komfort has an integrated draining function for surface water drainage.

3.7 Set-up

Connection of the draining function to the feed cover is via the enclosed draining connection. Insert the draining connection into the prescribed opening and lock using the one-handed quick-action closure.
Depending on installation depth (installation depth of the upper cover section), the draining connection must be shortened to the respective length (see Fig. 9) or extended using HT-pipe DN 70 if recessed installation using extension (art. no. 83071) is used.

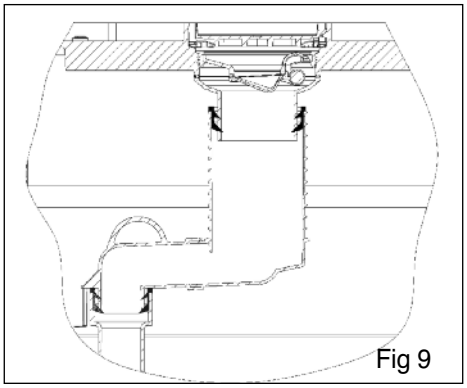


Fig 9

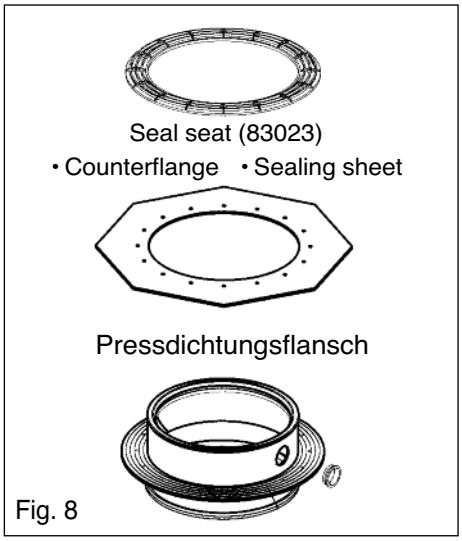
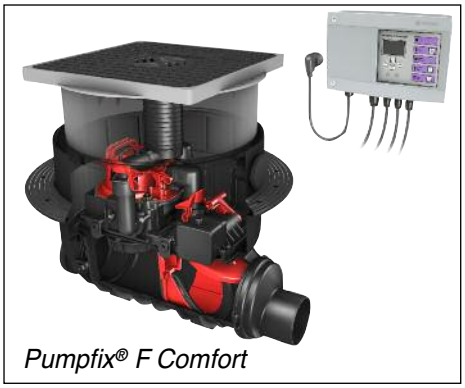
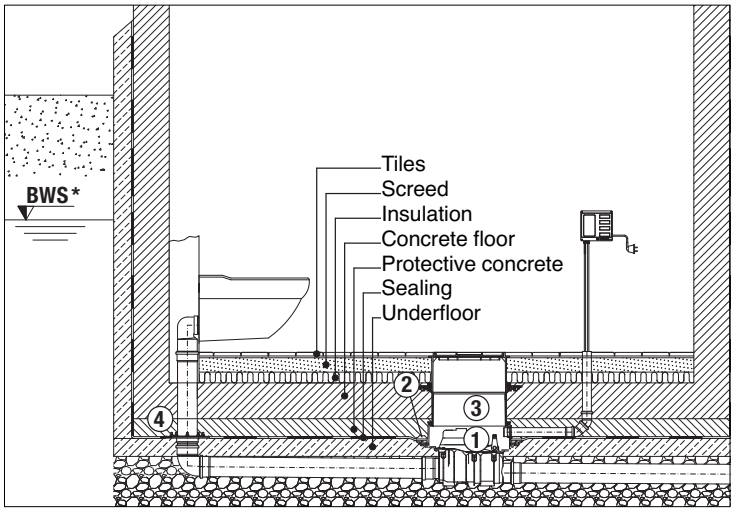


Fig. 8

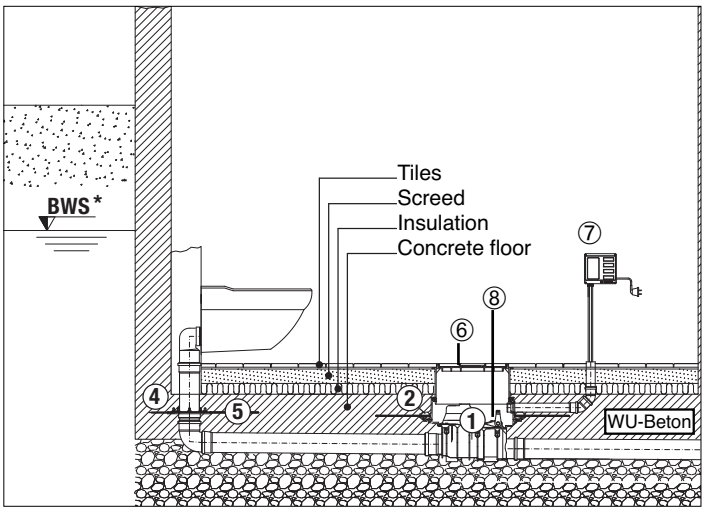


Pumpfix® F Comfort

Installation example “black tub”



Installation example “white tub”



① KESSEL-Pumpfix® F, Staufix® FKA, Staufix® SWA, Controlfix
② Compression seal flange with seal set art. no. 83023
③ Extension art. no. 83071
④ Adapter DN 100 with compression seal flange made of stainless steel art. no. 27198
⑤ Elastomer sealing sheet art. no. 27159
⑥ Upper cover section with plastic cover plate
⑦ Control unit
⑧ Locking lever

4. Service and maintenance

4.1 Service

The system must be checked once every month by the operator through observation of the switching routine for operational ability and leaks.
- Close emergency valve or with Komfort: press test key to carry out functional test on backwater valve -> valve closes
- Allow water to flow in
- Wait until level-LED + pump trigger.
- Switch off water feed
- Switch off level-LED and wait for pump
- Open hand lever (vertical position OPEN) -> Standard

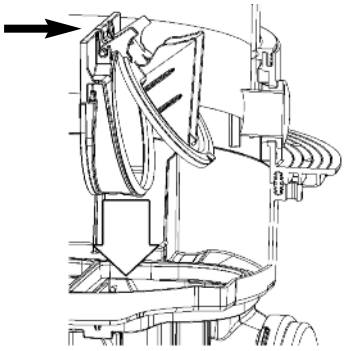
Komfort: Please note that the backwater valve must be open after the inspection has been completed.
The pump should be checked at regular intervals. If operational noises increase, pumping capacity decreases or there are vibrations in the pipeline system, the pump housing and impeller must be checked for any stubborn soiling or wear.

4.2 Maintenance (at least every six months)

CAUTION: Disconnect the unit from the mains during all servicing work! Heed safety instructions! No warranty will be granted in the event of insufficient maintenance! All the servicing and maintenance work described below may only be carried out by authorised qualified personnel. Repairs may only be carried out by the manufacturer.

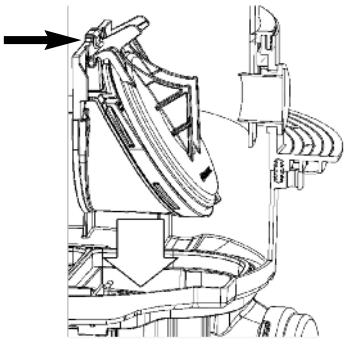
DIN 1986, part 3, must be heeded during maintenance work on systems. Maintenance work must be carried out at least every six months by authorised qualified staff.
The following tasks have to be carried out:
- Visual inspection of the complete system
- Thorough cleaning of the complete system and the pump
- Check on the complete system and pump housing for external damage and visible wear
- Check on the pump for free movement, wear and deposits
- Check the connection cables for mechanical damage and wear
- Check the seal connections for leaks and any recognisable wear
- Insulation test on the pump motor
- Check the control unit for damage and soiling
- Check and clean the ventilation valve
- Clean the optical probe

Standard



a) Pull the insertable part out
b) Clean all the parts
c) Check the seals
d) Apply lubricant (e.g. fittings grease) to the outside of the seals of the insertable parts as well as the guide parts of the flap valves

Comfort



e) Insert the insertable part exactly
f) Make sure the attachment clips are in place properly!
g) Heed cover installation 4.2.1
h) Carry out functional test in accordance with instruction manual 010-846.

We recommend these jobs after longer periods of standstill or intermediate storage, too, as well as after longer or frequent occurrences of backwater. If problems should occur that cannot be eliminated, please contact the specialist company who carried out the installation (see stamp on cover sheet) if in doubt.

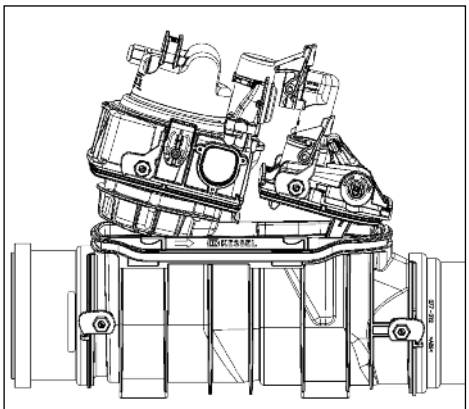


Abb. 12

4.2.1 Mounting the two covers (see Fig. 12, 13, 14)

Insert the covers on one side, push the other side down and lock in place using the locking levers. During installation of the overflow cover the red flap lever or the motor flap position must always be “CLOSED”

4.3 Test

4.3.1 Test Standard

1. Hold the pump probe into the water	"On" level	Level-LED lit
	Pump starts	Pump-LED lit

4.3.2 Test Comfort

1. Hold the motor probe into the water	Flap closes	Backwater-LED flashes Flap-LED flashes
	Flap closed	Backwater-LED flashes Flap-LED lit
2. Hold the pump probe into the water	Pump starts	Pump-LED lit

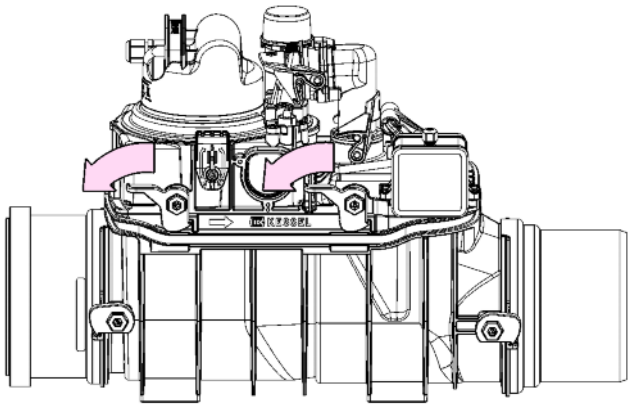


Fig. 13 shows the Comfort variant

Lock both sides!

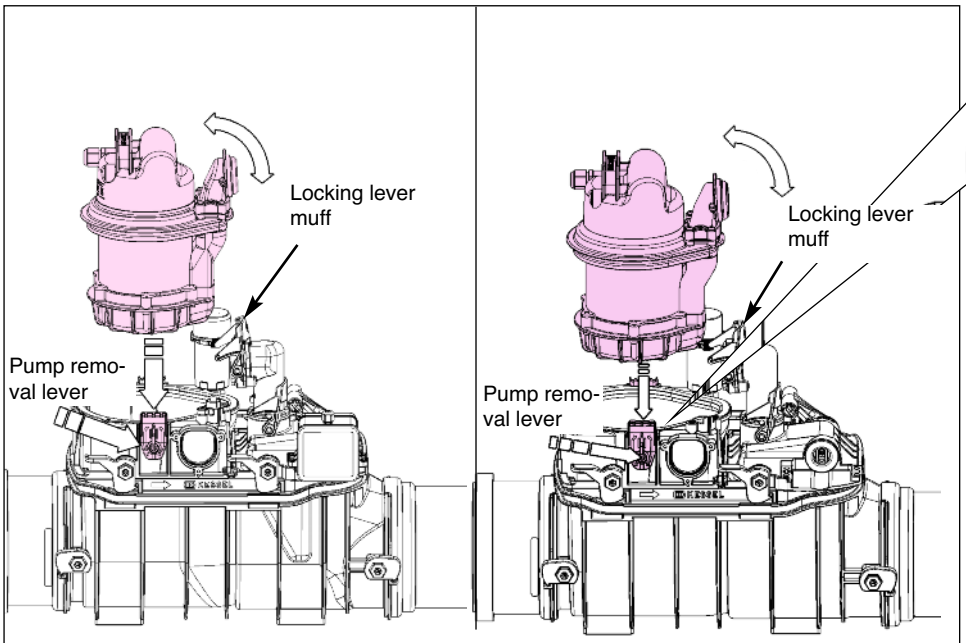
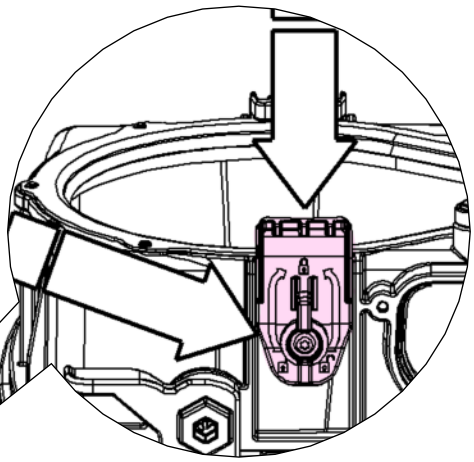


Fig. 14



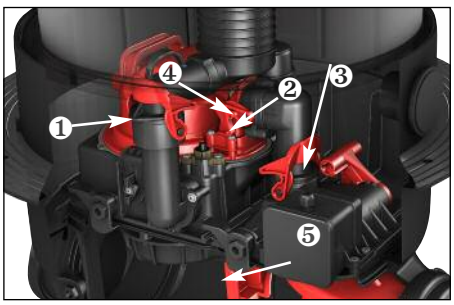
4.4 Pump removal:

The pump can be removed individually. To do this, turn both pump removal levers through 180°. This makes them fold outwards to the side so that the pump can be lifted out.

4.5 Motor installation:

The levelled drive shaft of the motor must be in a vertical position (state on delivery). Move the locking lever of the operating valve on the locking cover to the “CLOSED” position, insert the drive motor into the drive groove from above, and screw in place using the four M5 x 12 screws (TX25) on the locking cover (Fig. 16).

4.6 Removing motor ground installation



In this case, the outlet cover must be dismantled to remove the motor. To do this, open the locking lever and take the outlet muff out. Loosen levers ② and ③ and remove the bypass muff, to do this tilt pump connection muff ④ away or remove the pump if necessary. After removing the two cover locking levers ⑤ the outlet cover can be removed. Now the motor can be screwed off.

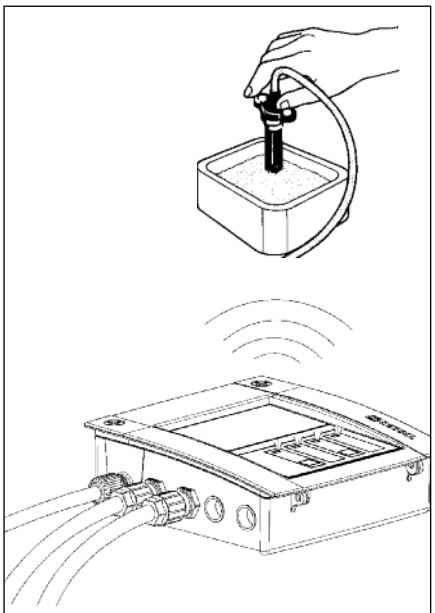


Fig. 15 Probe test

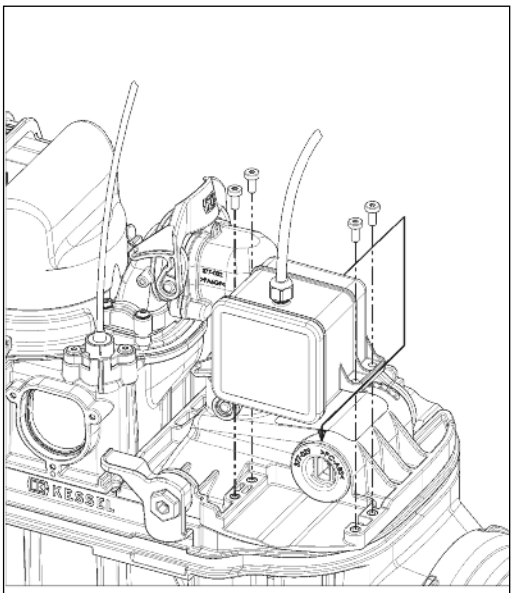


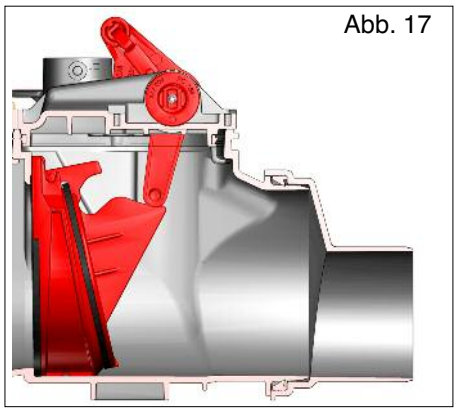
Fig. 16 Motor installation

4.7 How the emergency valve works

4.7.1 Standard

Locking position (Fig. 17, emergency valve completely closed): The hand lever of the emergency valve must be put in the respective CLOSED position. The backwater flap works as a pipe barrier. This function is only considered as protection from backwater during longer periods of absence (e.g. holidays).

Connected draining points are still drained. The emergency valve must be released again for normal operation.



Emergency flap can be locked by hand

4.7.2 Komfort

Locking position: The backwater flap is closed by pressing the TEST key (flap). The backwater flap works as a pipe barrier. This function is only considered as protection from backwater during longer periods of absence (e.g. holidays). Connected draining points are still drained.
After return, the emergency valve must be released again for normal operation: by pressing the TEST key (flap) again.
Make sure that there is no backwater when this takes place.

4.8 Servicing the ventilation

The ventilation (see spare parts section 6) must be cleaned regularly and the activated carbon filter (Fig. 18) must be changed annually or as required.

The ventilation must be cleaned and checked after every pump failure.

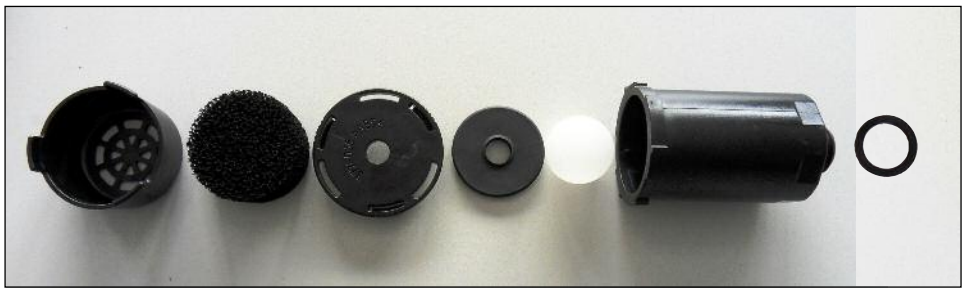


Fig. 17 Bleeder

Fig. 18 Activated carbon filter

Fig. 19 Cover

The bleeder (Fig. 17 from right to left) comprises seal, drain body, float ball, seal, bayonet locking cap, activated carbon filter and cover.

Pull the cover off (Fig. 19) by tilting it slightly to the side. Then turn bayonet locking cap (Fig. 20) ① and pull it up and off ②.

Remove seal and float ball and clean everything. Re-assembly takes place in reverse order.

Fig. 20 Bayonet locking cap

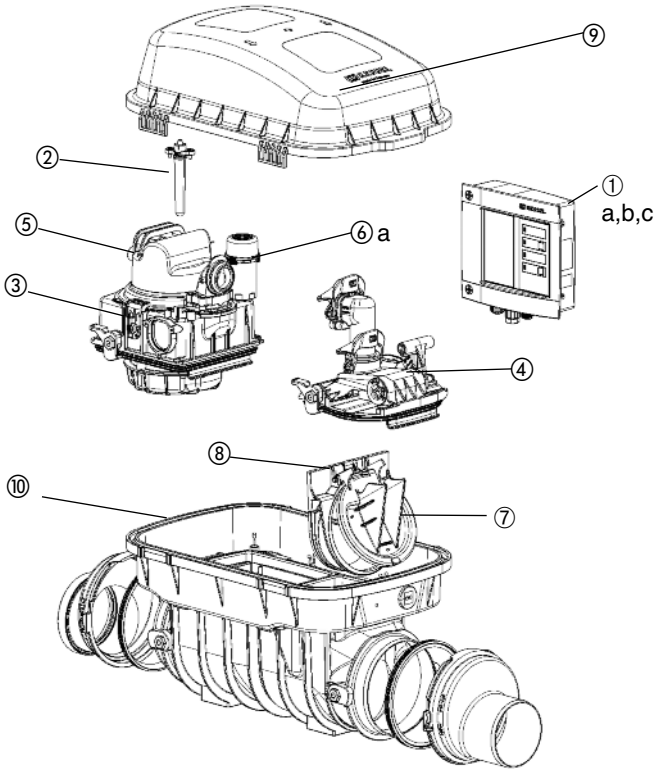
5. Spare parts

5.1 Standard

Pumpfix® F for installation in an exposed wastewater pipe

All spare parts can be purchased from a specialist company.

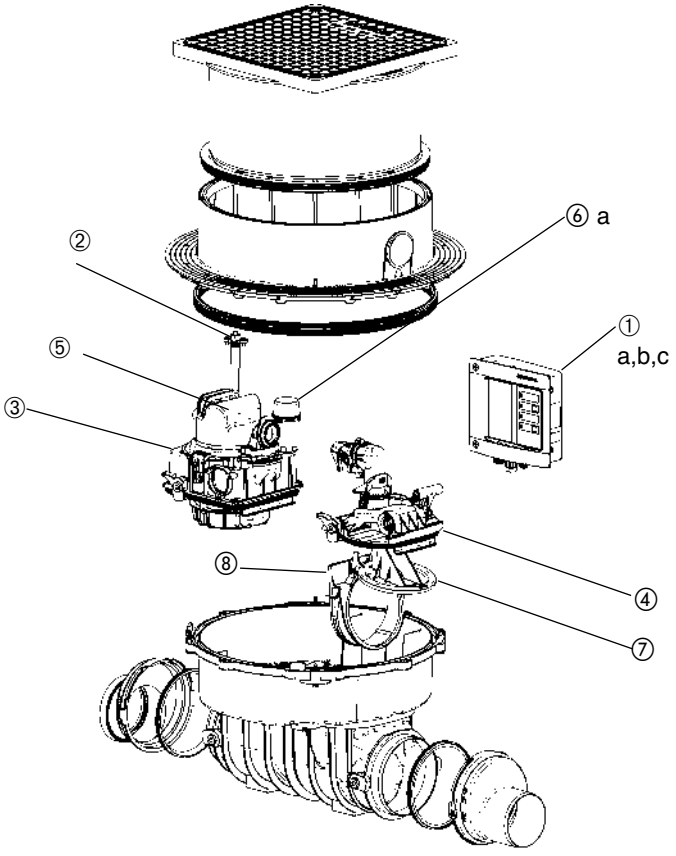
Designation	Art. no.
① *Pumpfix® F*-control unit Standard IP 54	28073
a) Additional board for potential-free contact	80072
b) Remove signal generator 20 m	20162
c) Battery 9V (2 units required)	197-081
② Optical probe IP 68 (5 m, inc. adapters)	80888
③ Cover pump feed side (without outlet function)	28052
④ *Pumpfix® F*-cover Standard outlet side	28053
⑤ *Pumpfix® F*-pump IP 68 (5m, inc. plug)	28351
⑥ Ventilation complete	28060
a) Activated carbon filter	28061
⑦ Mechanical flap	80033
⑧ Insertion part for mechanical flap	80034
⑨ Hood	80031
⑩ Transition piece	83032
Seal set II	70319



Pumpfix® F for installation in the ground plate

All spare parts can be purchased from a specialist company.

Designation	Art. no.
① *Pumpfix® F*-control unit Standard IP 54	28073
a) Additional board for potential-free contact	80072
b) Remove signal generator 20 m	20162
c) Battery 9V (2 units required)	197-081
② Optical probe IP 68 (5 m, inc. adapters)	80888
③ Cover pump feed side (without outlet function)	28052
④ *Pumpfix® F*-cover Standard outlet side	28053
⑤ *Pumpfix® F*-pump IP 68 (5m, inc. plug)	28351
⑥ Ventilation complete	28060
6a) Activated carbon filter	28061
⑦ Mechanical flap	80033
⑧ Insertion part for mechanical flap	80034
Seal set II	70319



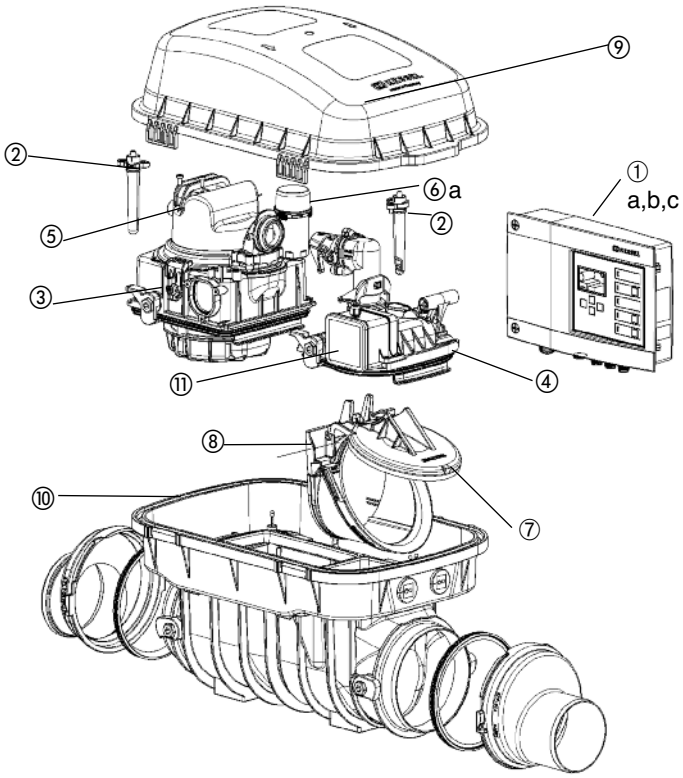
5. Spare parts

5.2 Comfort

Pumpfix® F for installation in an exposed wastewater pipe

All spare parts can be purchased from a specialist company.

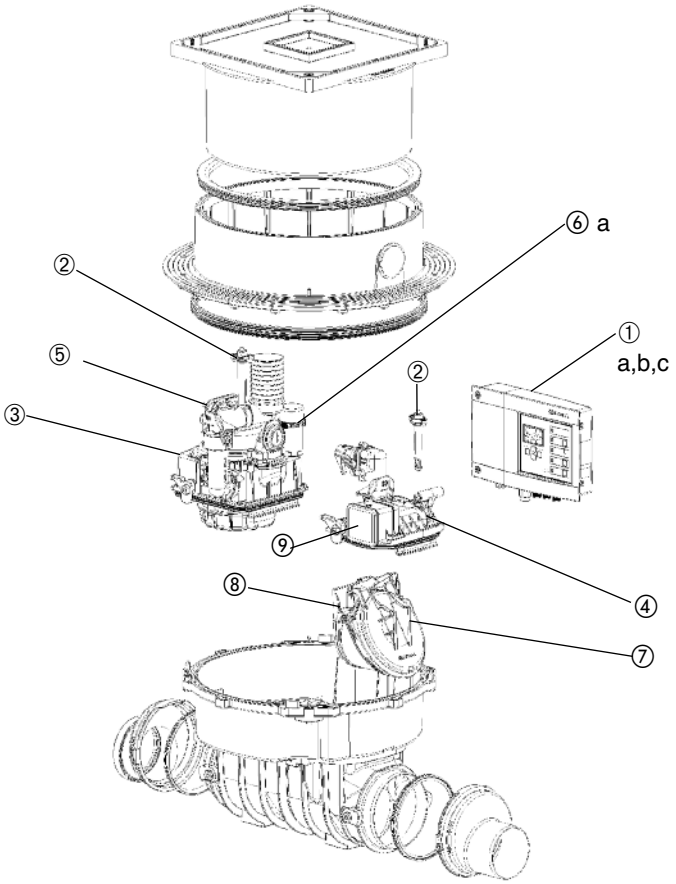
Designation	Art. no.
① *Pumpfix® F*-control unit Komfort IP 54	28071
a) Additional board for potential-free contact	80072
b) Remove signal generator 20 m	20162
c) Battery 9V (2 units required)	197-081
② Optical probe IP 68 (5 m, inc. adapters)	80888
③ Cover pump feed side (without outlet function)	28052
④ *Pumpfix® F*-cover Komfort outlet side	28056
⑤ *Pumpfix® F*-pump IP 68 (5m, inc. plug)	28351
⑥ Ventilation complete	28060
a) Activated carbon filter	28061
⑦ Motor-driven flap	80038
⑧ Insertion part for motor-driven flap	80039
⑨ Hood	83031
⑩ Transition piece	83032
⑪ Drive motor IP 68 (5m cable)	80076
Seal set II	70319



Pumpfix® F for installation in the ground plate

All spare parts can be purchased from a specialist company.

Designation	Art. no.
① *Pumpfix® F*-control unit Komfort IP 54	28071
a) Additional board for potential-free contact	80072
b) Remove signal generator 20 m	20162
c) Battery 9V (2 units required)	197-081
② Optical probe IP 68 (5 m, inc. adapters)	80888
③ Cover pump feed side (with outlet function)	28054
④ *Pumpfix® F*-cover Komfort outlet side	28056
⑤ *Pumpfix® F*-pump IP 68 (5m, inc. plug)	28351
⑥ Ventilation complete	28060
6a) Activated carbon filter	28061
⑦ Motor-driven flap	80038
⑧ Insertion part for motor-driven flap	80039
⑨ Drive motor IP 68 (5m cable)	80076
Seal set II	70319



6. Warranty

1. In the case that a KESSEL product is defective, KESSEL has the option of repairing or replacing the product. If the product remains defective after the second attempt to repair or replace the product or it is economically unfeasible to repair or replace the product, the customer has the right to cancel the order / contract or reduce payment accordingly. KESSEL must be notified immediately in writing of defects in a product. In the case that the defect is not visible or difficult to detect, KESSEL must be notified immediately in writing of the defect as soon as it is discovered. If the product is repaired or replaced, the newly repaired or replaced product shall receive a new warranty identical to that which the original (defective) product was granted. The term defective product refers only to the product or part needing repair or replacement and not necessarily to the entire product or unit. KESSEL products are warranted for a period of 24 month. This warranty period begins on the day the product is shipped form KESSEL to its customer. The warranty only applies to newly manufactured products. Additional information can be found in section 377 of the HGB.
   In addition to the standard warranty, KESSEL offers an additional 20 year warranty on the polymer bodies of class I / II fuel separators, grease separators, inspection chambers, wastewater treatment systems and rainwater storage tanks. This additional warranty applies to the watertightness, usability and structural soundness of the product.
   A requirement of this additional warranty is that the product is properly installed and operated in accordance with the valid installation and user's manual as well as the corresponding norms / regulations.

2. Wear and tear on a product will not be considered a defect. Problems with products resulting from improper installation, handling or maintenance will also be considered a defect.

   Note: Only the manufacturer may open sealed components or screw connections. Otherwise, the warranty may become null and void

01.06.2010

7. Commissioning Protocol for installer

Separator Type: _____

Day / Hour _____

Project description /Building services supervisor _____

Address _____

Telephone / Fax _____

Builder _____

Address _____

Telephone / Fax _____

Planner _____

Address _____

Telephone / Fax _____

Contracted plumbing company _____

Address _____

Telephone / Fax _____

KESSEL-Commissions no.:

System operator /owner _____

Address _____

Telephone / Fax _____

User _____

Address _____

Telephone / Fax _____

Person of delivery _____

Other remarks _____

The system operator, and those responsible, were present during the commissioning of this system.

_____	_____	_____
Place and date	Signature owner	Signature user

Notice

8. Commissioning Protocol for installation company

Handover certificate (copy for the company carrying out the installation)

❑ The initial operation and instruction was carried out in the presence of the person authorised to perform the acceptance and the system operator.

❑ The system operator/person authorised to perform the acceptance was informed about the obligation to service the product according to the enclosed operating instructions.

❑ Initial operation and instruction were not carried out.

The client/ person responsible for initial operation was handed the following components and/or product components

_____

_____

_____

_____

Initial operation and instruction is being carried out by (company, address, contact, phone)

_____

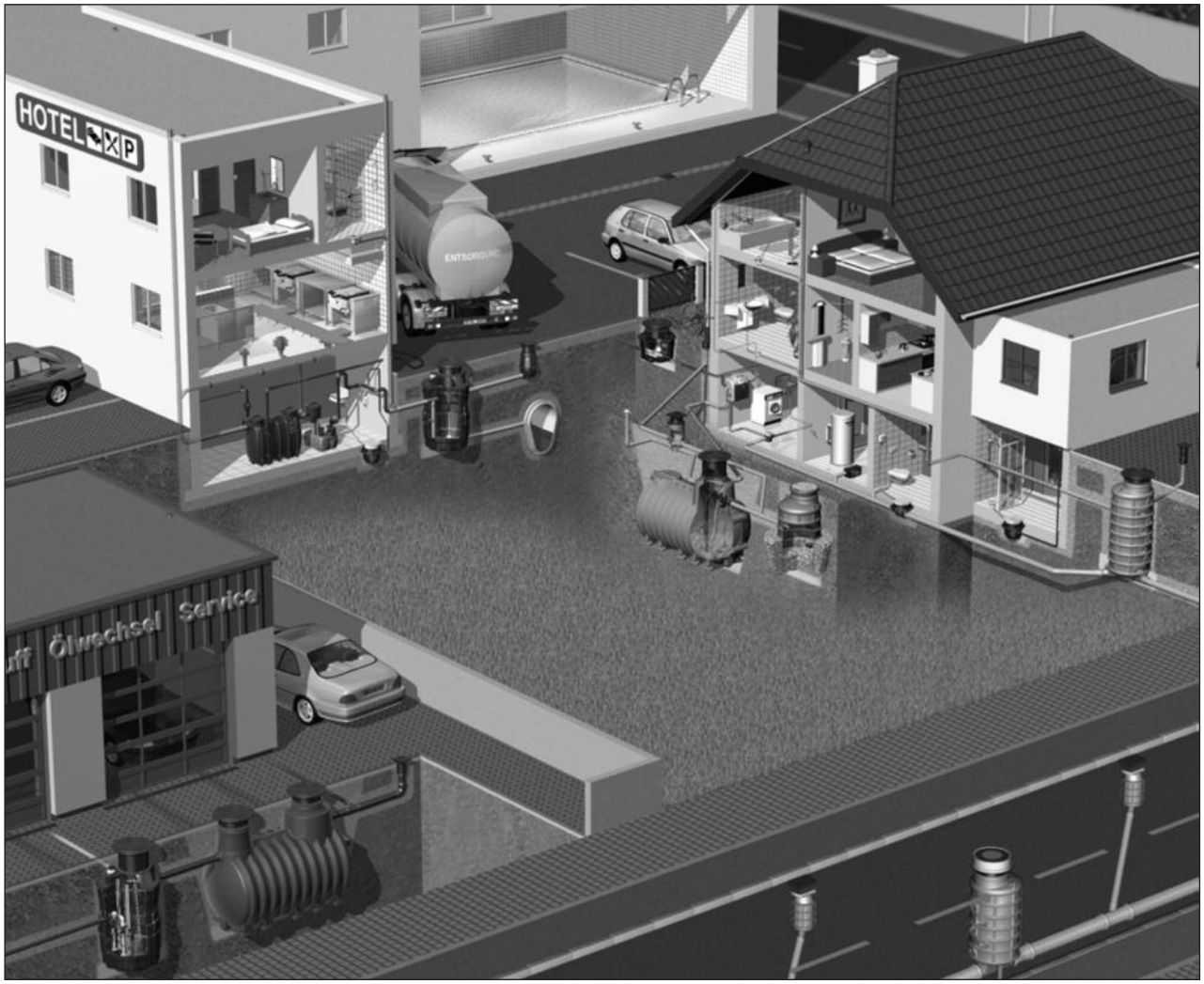
_____

_____

_____

The exact coordination of the dates for initial operation/instruction is being carried out by the system operator and person responsible for initial operation.

Place, date	Signature of person authorised to perform acceptance	Signature of system operator	Signature of the company carrying out the installation work
_____	_____	_____	_____



- ❑ Backwater protection
- ❑ Lifting Stations and pumps
- ❑ Drains and shower channels
- ❑ Separators
  - -Grease Separators
  - -Oil-/Fuel-/Coalescence Separators
  - -Starch Separators
  - -Sediment Separators
- ❑ Septic Systems
- ❑ Inspection Chambers
- ❑ Rainwater Management Systems

KESSEL